

**YEAR 1**

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>COURSE DESCRIPTION</b>
DIMA 1001	Anatomy and Physiology	3.0	The course content is designed to develop students' knowledge of the structure and function of cells, tissues, organs, and systems of the human body, branches of medicine and associated medical terminology. Topographical anatomy will serve as an important guide to radiographic positioning techniques. by familiarizing students with landmarks, surface markings, organ relationships and body habitus. Radiographic images are used to support the application of knowledge of the subject.
DIMA 1002	General Physics	3.0	This course is designed to guide the student in understanding the concepts of mechanics, matter, atomic theory, magnetism, electricity, electromagnetism, transformers, and X-ray equipment circuitry.
DIMA 1003	Introduction to Medical Imaging Modalities	2.0	The course is designed to provide students with the terminology, function, operation, application, equipment, indications, contraindications, patient preparation and aftercare, radiation protection, advantages and disadvantages of Fluoroscopy, Computed Tomography, Magnetic resonance Imaging, Nuclear Medicine, Interventional Radiology, radiation Therapy and related fields.
DIMA1004	Medical Law and Ethics	2.0	This course is designed to guide the student in differentiating between the sphere of moral and legal responsibility of the health professional. The student is guided towards a better understanding of the underlying constructs of logical argument vital to ethical and legal decision-making. Special emphasis will be given to medical law as it applies to the patient, the radiographer and student radiographer, the radiologist and hospital
DIMA 1005	Microbiology	2.0	This course introduces the student to the fundamentals of microbiology, guiding them towards a basic understanding of the principles involved in the identification of diseases, methods of microbial destruction, isolation and hospital and community-acquired infections.
DIMA 1006	Patient Management	3.0	The course content provides basic principles and concepts of patient care and management, including introduction to the organizational structure of health services, principles of professionalism, the responsibilities and functions of multiple health care team members, principles of hygiene, patient safety, the physical and psychological needs of patients, and emergency care.
DIMA 1007	Practicum (Simulation)	3.0	The course content introduces students to simulated routine radiographic procedures in the laboratory setting. Students learn principles of x-ray unit manipulation, evaluation of the x-ray requisition, room and patient preparation, communication, patient positioning, radiographic exposure techniques, radiation protection and general patient care and safety.

DIMA 1008	Principles of Radiographic Exposure	3.0	The course content comprises the history of the discovery of x-rays, cellular biology, types and sources of ionizing radiation, radiation energy transfer and effects, prime factors of radiographic exposure, legislation, radiation measurement units, detectors, cardinal principles of radiation protection, and patient protection.
DIMA 1009	Psychology	3.0	This course is intended to help the student develop a better understanding of human behaviour. The student will be instructed in basic psychological concepts which are relevant to the understanding of self and interpersonal behaviour. The student will also be guided towards a better understanding of the psychology of the ill, terminally ill and the patient's reaction towards death. This will help the student in better overall patient management.
DIMA 1010	Radiation Physics	3.0	The course provides student with the fundamentals of the production, detection, and interaction of ionizing radiation with matter, and basic principles of radioactivity and radiation protection.
DIMA 1011	Radiation Protection, Radiation Biology and Dosimetry	3.0	The radiation biology component of the course is designed to guide the student in understanding the effects of ionizing radiation on human tissues. The genetic and somatic effects of radiation and the changes that can occur in human tissues will be outlined in detail. Immediate and latent manifestation of these changes will be included. The course will address radiation dose response relationships and the factors influencing radiation effects on living systems.
DIMA 1012	Radiographic Positioning and Procedures	3.0	The course content incorporates general anatomy, radiographic positioning terminology, indications for conducting radiographic positioning procedures, request evaluation, patient preparation and care, positioning techniques, equipment and accessories, radiographic exposure techniques, radiation protection, and image critique and evaluation.
DIMA 1013	Seminars	1.0	Seminars and workshops for the level 1 segment of the programme are designed to explore social and professional issues directly or indirectly affecting the practice of diagnostic radiography. Students will participate in debates, discussions, and presentations of topics addressing the issues. Workplace issues are explored to raise students' awareness of the impact of behaviours on work performance.
DIMA 1014	Clinical Practicum	9.0	The clinical practicum experience includes exposure to practice radiology departments in urban and rural clinical settings, both public and private, where trained professionals will guide students' hands-on experience. Each student will be assessed in basic positioning of pre-determined radiographic studies covered in didactic instruction. In addition, students will be exposed to supporting areas administrative, nursing, reporting, and image processing functions of the department.

**YEAR 2**

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDIT</b>	<b>COURSE DESCRIPTION</b>
DIMA 2001	Anatomy and Physiology	3.0	The course content is designed to develop students' knowledge of the structure and function of systems of the human body. The fundamentals of sectional anatomy relative to Computed Tomography and Magnetic resonance Imaging are addressed. Laboratory sessions augment the delivery of course content.
DIMA 2002	Clinical Education and Image Analysis	3.0	The course introduces students to the radiographic appearance of normal and abnormal anatomy, other pathological conditions, image artefacts and image processing defects. The course content exposes students to structured approaches to image analysis and evaluation, and explores the impact of exposure factor selection, image-processing factors, and patient positioning on the resultant radiographic image.
DIMA 2003	Epidemiology and Community Health	2.0	This course is designed to provide the student with the basic principles of epidemiology important to their medical training. It will provide a look at types of epidemiological studies, health surveys and screening, disease surveillance, investigation of disease outbreaks, and the relationship between epidemiology and community health.
DIMA 2004	Health Education	2.0	This course is designed to familiarise the student with important aspects of health and disease states, and the need for an interactive approach between health care providers and communities in solving health problems. Elements of personal health will also be explored focusing on the components which contribute to health and well-being.
DIMA 2005	General Physics	3.0	This course provides explanation of advanced principles of physics and their application to x-ray equipment. Details of advanced circuitry, high voltage transformers, and rectification will be outlined
DIMA 2006	Patient Management	3.0	This course content includes patient assessment procedures, specialized investigations requiring the use of contrast media to include urinary, gynaecological, cardiovascular, myelographic, and lymphatic studies. The indications, contraindications, patient preparation, trolley preparation, patient care during the study, after-care procedures, and special considerations are detailed. Ward and operating theatre procedures will be described in detail, including the responsibility to the patient, other patients and staff regarding radiation protection, and barrier nursing and reverse barrier nursing procedures in handling the infectious patient. Special patient care procedures in handling patients with attachments and implants, and patients undergoing Magnetic Resonance Imaging, Computed Tomography procedures, and interventional radiology are outlined.

DIMA 2007	Pharmacology	2.0	This is an introductory course in pharmacology. The student will be instructed in the various categories of drugs and the regulations governing their use, storage and methods of administration. The student will be required to perform basic calculations pertaining to drug dosage. Reactions to drugs will also be discussed. Contrast media used in radiology and reactions to administration of these drugs will be discussed in detail.
DIMA 2008	Radiographic Equipment and Maintenance	3.0	The course content exposes students to the construction of x-ray equipment and circuitry, and how electrical energy is generated and distributed. Features of high-tension transformers, control of kilovoltage, tube current, mains voltage compensation, and rules for the safe use of x-ray equipment and accessories are discussed.
DIMA 2009	Radiographic Imaging and Quality Management	3.0	The course content provides an overview of the history of film-based imaging, the terminology of digital imaging, types of detectors, calculations of exposure indicators, principles of image appearance, the effect of digital imaging on patient exposure, and quality assurance and control considerations.
DIMA 2010	Radiographic Positioning and Procedures	3.0	This course will guide the student on modifications to routine imaging of the axial and appendicular skeleton, contrast studies of the systems of the body, and introduction to specialized imaging techniques
DIMA 2011	Research Methodology	2.0	This course is designed to familiarize the student with the concepts and principles of research, including topic selection and formulation, literature review, methodology, data collection and interpretation, and project writing.
DIMA 2012	Seminars	1.0	The foundations of the radiologic sciences profession are explored to include its history, organization within the health care system, branches, modalities, licensure, accreditation, professional bodies, responsibilities, professional development, and advancement opportunities. Workplace issues are explored to raise students' awareness of the impact of behaviours on work performance.
DIMA 2013	Clinical Practicum 1	9.0	This course exposes students to more complex radiographic positioning procedures for which they are required to display second level competencies in patient positioning, patient care, radiation protection, safety practices, case management skills, and professionalism required in interprofessional collaboration.
DIMA 2014	Ward Rotation (Practical)	4.0	The ward rotation is designed to provide students the opportunity to observe and participate in basic nursing procedures during their rotation to multiple wards in a teaching hospital. Students are expected to participate in supervised ward activities as listed in their checklist of observations. This assignment serves to enhance student understanding and appreciation of patient condition, patient needs, and the level of nursing care required, as well as the physiological changes which accompany disease and injury.

			Students will be expected to interact with patients, as far as possible, to further develop their understanding of disease processes and injuries.
DIMA 2015	Patient Management (Practical)	2.0	This is a practical course which will guide the student in the preparation for the execution of specialized procedures utilizing aseptic techniques in the radiology department. Students are introduced to medical instruments used in special radiographic procedures, are required to practice trolley-setting for a minimum of 3 special radiographic procedures, and navigating the sterile field without contaminating same
DIMA 2016	Clinical Practicum11		This course comprises a single practicum examination selected from the list of competencies assigned for completion at Year 2 of the program. The examiner may choose a study from the Year 1 list, but which presents a sufficiently challenging patient care or positioning scenario appropriate to the year 2 level.

### YEAR 3

<b>COURSE CODE</b>	<b>COURSE CREDIT</b>	<b>CREDIT</b>	<b>COURSE DESCRIPTION</b>
DIMA 3001	Clinical Practicum	15.0	<p>This course constitutes the final local segment of the practical component of the programme. At this level the final year student should be competent in the performance of all basic radiographic examinations and should be making steady development in the performance of more complex procedures with minimal supervision.</p> <p>The student is assessed on competencies in the preparation and management of the radiographic room and patient, accurately position patients, applying radiation protection, manipulating special radiographic equipment, and critiquing radiographic images in advanced routine and specialized</p>
DIMA 3002	Community Project	1.0	<p>The course exposes students to the care of institutionalized citizens with special needs. Students are assigned a 16 -hour placement in a special care home/institution, and are expected to participate in supervised general care of residents. Students are evaluated by the placement institution's senior staff, and the student submits a portfolio of their engagement during the rotation.</p>
DIMA 3003	Health Care Management	3.0	<p>This course is designed to instruct the student in the theory and practice of health care management. The course applies principles of management, finance, and legal framework in exploring the structure, function, relationships, and issues impacting the delivery of health care.</p>
DIMA 3004	Pathology	3.0	<p>This course is designed to introduce the student to the aetiology, signs, symptoms, and prognosis of various diseases/conditions.</p>
DIMA 3005	Radiographic Equipment and Maintenance	3.0	<p>The course explores the structure and function of routine and advanced modality x-ray equipment. Students are guided in the elements of quality assurance required in the care and maintenance of x-ray equipment.</p>
DIMA 3006	Radiographic Imaging and Quality Management	3.0	<p>The course content provides an overview of the principles of radiographic imaging and quality management in the production of diagnostic images. Principles of digital imaging, types of detectors, calculations of exposure indicators, image appearance, the effect of digital imaging on patient exposure, and quality assurance and control considerations are explored.</p>

DIMA 3007	Radiographic Positioning and Procedures	3.0	The course explores advanced imaging and interventional procedures and incorporates the use of analysis in the application of fundamental principles of patient management, radiation protection, and imaging techniques.
DIMA 3008	Radiological Pathology and Diagnosis	3.0	This course provides an introduction to the process of image evaluation and diagnosis of basic pathology, recognition of normal and abnormal anatomical presentations, and the basic steps required in the process of detecting disease and injury processes.
DIMA 3009	Overseas Elective	4.0	The optional 4-week overseas clinical placement exposes students to the range of imaging facilities available in diagnostic imaging. By facilitating travel overseas to other radiological facilities, students are provided with the opportunity to observe and participate in the most advanced imaging techniques.
DIMA 3010	Specialised Imaging Modalities and Therapy	6.0	This course explores the principles of seven imaging and treatment modalities to include Digital Imaging, Digital Subtraction Angiography, Computerized Tomography, Magnetic Resonance Imaging, Ultrasound, Mammography, Radionuclide Imaging, and Radiation Therapy
DIMA 3011	Phlebotomy	2.0	This course is designed to provide the student with the fundamentals of phlebotomy, but will concentrate on venipuncture where the student will be put in the practical situation to actually administer contrast injections. The risk of giving contrast injections will be reviewed to ensure that the student fully understands the complications which may arise and their role as qualified radiographers in the event of contrast reaction.
DIMA 3012	Viva Voce	0	The examination is a capstone assessment of accumulated knowledge spanning 3 years of clinical and academic curriculum of the program. The examination utilizes mainly radiographic images from which the candidate is expected to identify anatomy, common pathology, patient care and radiation protection considerations, artefacts, and provide detailed critique of the image. Additionally, other artefacts of multiple courses are utilized as examination resources to include phantoms, equipment, accessories etc.
DIMA 3013	Research Project	2.0	Students undergo 9 months of research supervision by in-house faculty during which they are required to make timely submission of their progress including: <ol style="list-style-type: none"> <li>1. Research topic</li> <li>2. Literature review</li> <li>3. Introductory chapter</li> </ol>

			4. Research methodology 5. Survey instrument 6. Data collection and analysis 7. Discussion of results 8. Conclusions 9. Recommendations 10. References
DIMA 3014	Clinical Practicum		This examination is the final clinical practicum assessment for which students are examined on 2 complex cases in the clinical setting to incorporate room and case management. Students execute both cases with minimal supervision. Each examination is executed in different clinical settings.

### **FOUNDATION/UNIVERSITY COURSES**

Students are required to complete the following Foundation/University courses during the first 2 years of the program.

1. EDTK2025: Introduction to Computers
2. FOUN1014: Critical Reading and Writing in Science and Technology and Medical Sciences **OR** FOUN1019: Critical Reading and Writing in the Disciplines
3. FOUN1101: Caribbean Civilization
4. FOUN1301: Law, Governance, Economy, and Society **OR** LING1819: Beginner's Caribbean Sign Language
5. ECON1003: Mathematics for the Social Sciences
6. SOCI1005: Introductory Statistics for the Behavioural Sciences